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AVERAGE net income on 988 Iowa farms dropped from $11,-360 in 1950 to $8,958 in 1951. This was a 21 percent drop. And why the decline? Increased feed costs without a corresponding rise in livestock prices, lower crop yields and higher operating costs.

Each year a number of farmers (this year, 988) over the state keep records of their farm business in cooperation with the Iowa Agricultural Extension Service. Most of these records come from above-average farms—farms that are larger in acreage and volume of business and have higher net incomes than the average in the state. Still the records from these farms indicate the trends in production and income that occurred in 1951. And they also give us some standards to use in judging the efficiency of other farm businesses.

Records on these 988 farms were kept on the inventory or accrual basis. On rented farms the net income includes the combined net income of both operator and landlord.

Income Down, Costs Up

Comparing 1951 with 1950, net incomes dropped 21 percent. Operating costs rose 7 percent—from an average of $7,720 in 1950 to $8,-236 in 1951. Charges for the use of land and capital plus operator and family labor went up 6 percent—from $4,730 to $5,024. Table 1 shows the trends of income and costs as well as resources used on these farms since 1940.

High level production of livestock and livestock products last year without an increasing demand meant there was no further rise in prices in 1951. And, at the same time, increasing costs for labor and machinery meant increased operating expenses. Also a poor crop year brought on increased feed costs and a smaller feed supply which reduced feeding margins.

Investments in machinery and equipment rose from an average of $6,301 per farm in 1950 to $7,034 in 1951. This is the depreciated value of the machinery and equipment. The farms were operated with 1 month's less labor last year than a year earlier; this partially offsets the increased investment. But these farms are livestock farms, and feeding margins, measured by livestock income per $100 of feed fed, dropped from $181 in 1950 to $145 in 1951. In addition corn yields dropped 4 bushels per acre, and the corn was below normal in quality. A higher overhead and a lower production of feed without improved livestock prices could only result in a lower net income in 1951.

The changes in farm organization since 1940 can best be shown by comparing 1951 with 1940. The increased mechanization, higher labor costs and the related management problem are then brought into focus.

Net incomes increased from $3,300 in 1940 to $8,958 in 1951, an increase of 2.7 times. To get this increase, it took 3.4 times as much operating expense, 2.7 times as much capital in feed and livestock, 2.7 times as much capital in machinery and equipment and 4 months less labor per farm than it did in 1940.

This shift, involving a higher proportion of cash costs, means that changes in physical production are reflected more readily in income. The problem is how to maintain an adequate volume of business to meet high-level cash costs. These costs are hard to cut down even though physical production goes down.

Incomes Vary

Even more meaningful than the changes in income and costs from year to year are the differences in incomes between farms of the same size and type in the same year.

Of the 988 farms whose records were analyzed, the high-profit third had an average management return of $8,536. The low-profit third had a management loss of $488—a difference of about $9,000. While some folks say that a good profit is simply a result of "good luck," study of the management analysis of these farms shows that it's more than luck. The figures in table 2 highlight the difference between the "high" and "low" farms.

These figures show that there was small difference in the size of business when measured in acres. The high-profit farms averaged only 7 acres larger than the low-profit farms. However, measuring

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the size of business in terms of volume per worker (or gross profits per man) shows a very wide difference between the two groups. Gross profit measures the production of a farm in dollars. The high-profit group had an average gross profit per worker of $12,453—more than $5,000 higher than the average of the low group.

Farm income dropped in 1951 in spite of relatively favorable prices. Thus, a large volume of business, handled efficiently, was the key to high profits in 1951.

Efficiency

Table 2 indicates some important measures in terms of efficiency, too. Since the 988 farms were livestock farms, the efficiency in processing feed ranks high in determining the profitability of the business. The high-profit farms averaged $159 of livestock income for every $100 of feed fed. The low farms averaged $117. This means that for every dollar's worth of feed fed, the high-income farmers received 59 cents above feed costs, while the low group received only 17 cents.

These figures are affected by the combination of livestock enterprises, sanitation, disease control, time of marketing, rations and breeding stock selection. The "right" combination for a given farm can be determined only by the management capacity of the operator and his ability to use practices consistent with the resources he has available. In all factors measuring efficiency of livestock enterprises—pigs weaned per litter, dairy income per cow, poultry income per hen, beef income per head—the high farms rate well above the low farms.

Differences in crop yields also show up between the two groups of farms. The high farms had 11 bushels more corn per acre and a gross value of crops per acre of $14 higher than the low-profit farms.

Management

The job of running a successful farm business isn't just one of getting high production per animal, per acre, or per man. It also includes the job of using labor and equipment efficiently. But even here, favorable prices and an adequate volume of business can cover up or more than offset what appears to be excessive power and machinery costs. In fact (as has been true for several years), the high-profit farms last year had slightly higher machinery and power costs per acre than the low-profit farms.

The answer is that to get high-level production you need enough machinery and equipment to do a good job at the right time. Thus, the high-profit farms had slightly higher costs per acre, but the higher level of production meant greater profits. But when resources are such that you can't increase production regardless of power and machinery used, minimum power and machinery costs become more essential.

Taking the farm business as a whole, the high-profit farms pro-

TABLE 1
Farm Income and Cost Trends—1940 to 1951

	1951	1950	1949	1940
Gross profits (production in dollars)	$17,194	$19,080	$13,450	$5,730
Operating expense	8,236	7,720	7,150	2,430
Net farm income	8,958	11,360	6,300	3,300
Charges for equity in land, capital, and operator and family labor	5,024	4,730	4,870	1,800
Earnings for management (management return)	3,934	6,630	1,430	1,500
Resources used:				
Feed and livestock	$20,096	$15,442	$17,123	$7,394
Machinery and equipment	7,034	6,301	5,586	2,624
Labor-months hired operator and family	20 mo.	21 mo.	22 mo.	24 mo.
Land	251 A.	250 A.	255 A.	238 A.
Efficiency:				
Livestock income per $100 of feed fed	$ 145	$ 181	$ 150	$ 150
Corn yields per acre	52 bu.	56 bu.	57 bu.	60 bu.
Number of farms included	988	968	877	830

TABLE 2
Management Analysis of 988 Well-Managed Iowa Farms, 1951

	Av. of all 988 farms	Av. of 333 high-profit farms	Av. of 333 low-profit farms
Net farm income	$ 8,958	$13,854	$ 4,422
Management return	$ 3,934	$ 8,536	$—448
Land use:			
Corn yields per acre	52 bu.	58 bu.	47 bu.
Gross value of crops per acre	$ 56	$ 63	$ 49
Livestock income per $100 of feed fed	$ 145	$ 159	$ 117
Pigs weaned per litter	6.7	7.0	6.4
Dairy income per cow	$ 209	$ 217	$ 201
Poultry income per hen	$ 6.58	$ 6.66	$ 5.94
Beef income per head	$ 76	$ 89	$ 69
Machinery and labor:			
Crop acres per man	102 A.	98 A.	98 A.
Gross profits per man	$10,295	$12,543	$7,394
Machinery and power cost per A.	$ 16	$ 17	$ 16
Income-cost ratios:			
Gross profit per $1 cost	$ 2.09	$ 2.52	$ 1.56
Net income per $1 cost	$ 1.09	$ 1.52	$ 0.56
Acres per farm	251 A.	257 A.	250 A.

duced $2.52 for each $1 of expense. The low-profit farms produced $1.56 for each $1 of expense. In other words, the well-managed farms reaped a $1.52 profit and the less-well-managed farms only 56 cents profit for each $1 of expense.

How does your own farm business line up with the management analysis of these 988 farms? The factors shown in table 2 are good guideposts for a successful farm business. By comparing them with those of your own farm business, you may be able to find your strong and weak points.

TABLE 3
Comparisons of Production, Income and Costs Based on Size of the Farms

	0 to 139 A.	140 to 199 A.	200 to 259 A.	260 to 359 A.	360 A. and over
Capital, land and labor used:					
Livestock and feed	$ 9,900	$13,500	$18,600	$23,700	$37,700
Machinery and equipment	$ 4,200	$ 5,300	$ 6,900	$ 8,400	$10,700
Land, acres	111	166	227	306	482
Labor, months	14	16	19	23	30
Financial returns:					
Net farm income	$ 5,034	$ 6,818	$ 8,386	$10,314	$14,828
Management return	$1,606	$ 2,612	$ 3,586	$ 4,422	$ 6,986
Sources of income and costs:					
Value of feed produced	$ 4,648	$ 6,742	$ 9,371	$12,000	$16,842
Livestock income over feed costs	$ 3,909	$ 5,096	$ 6,029	$ 6,872	$ 9,971
Other income	$ 475	$ 377	$ 600	$ 799	$ 1,669
Gross profits	$ 9,032	$12,215	$16,000	$19,671	$28,482
Operating expenses	$ 2,249	$ 3,230	$ 4,571	$ 5,657	$ 8,600
Net farm income	$ 5,034	$ 6,818	$ 8,386	$10,314	$14,828
Production:					
Crops, acres	76	117	154	212	305
Litters of pigs	22	25	32	37	48
Cows milked	7	6	6	6	6
Other cattle	31	57	72	90	125
Hens	125	133	113	125	100
Value of livestock production	$12,147	$14,380	$18,771	$22,957	$33,328
Value of feed fed	$ 8,239	$ 9,284	$12,742	$16,085	$23,357
Income over feed costs	$ 3,908	$ 5,096	$ 6,029	$ 6,872	$ 9,971
Efficiency:					
Gross value of crops per crop acre	$ 59	$ 55	$ 56	$ 53	$ 52
Returns per $100 feed fed	$ 147	$ 155	$ 147	$ 143	$ 143
Machinery and power costs per acre	$ 20	$ 17	$ 16	$ 14	$ 13
Gross profits per man	$ 7,720	$ 9,184	$10,130	$10,245	$11,392
Crop acres per man	65	88	97	110	122
Number of farms:	89	296	252	211	140

TABLE 4
Variation in Farm Business by Areas of the State

	Area 1	2	3	4	5	6	7
Net farm income	$9,356	$10,947	$11,267	$8,259	$9,693	$4,640	$6,490
Management return	$4,239	$ 5,345	$ 6,005	$3,564	$3,422	$1,096	$2,654
Acres per farm	240	241	271	250	255	268	235
Crop production:							
Percent of land in harvested crops	71	68	78	64	77	47	70
Acres of corn	82	84	111	75	92	47	81
Corn yield per acre (bu.)	62	67	54	46	47	35	58
Livestock production:							
Litters of pigs	33	46	41	27	38	17	30
Cows milked	6	7	6	12	4	6	4
Hens	101	131	132	173	156	103	130
Number of cattle	81	95	87	80	139	42	72
Labor, months	20	22	22	21	21	17	18

Size and Area

For comparison, the 988 farms are divided into five acreage groupings in table 3. Resources used, financial returns, sources of income, costs and production are listed according to the five size groups.

With the favorable price relationships for agriculture in 1951, the larger farms made more money than the smaller farms. The larger the farm, the greater the portion of income coming from the production of the land.

In the size group ranging from 0 to 139 acres, $4,648 or 51 percent of the gross profits came from crops produced, while $3,909 or 43 percent came from processing feed through livestock. On the farms 360 acres and over in size, $16,842 or 59 percent of the gross profits came from crops, while $9,971 or 35 percent came from processing feed through livestock.

The smaller farms have operator and family labor costs similar to those of the larger farms as well as a higher machine cost per acre. In order to have a good income, the smaller farms find it necessary to get a greater portion of their income by processing feed through livestock. This can be done in either of two ways: (1) by being more efficient with the livestock handled, or (2) by buying greater quantities of feed relative to what is raised on the farm than do the larger farms. Actually the most successful of the smaller farms used a combination of these two methods to boost their income.

Finally, since land resources and weather conditions are not uniform over the state, variations in income and production by seven different areas of the state are shown in table 4.